

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listing of claims in the present application:

LISTING OF CLAIMS:

1. (previously presented) A hypodermic needle assembly for use in making intradermal injections, comprising:

a hub portion that is able to be attached to a drug container;

a needle supported by the hub portion, the needle having a hollow body with a forward end extending away from the hub portion; and

a limiter portion that surrounds the needle and extends away from the hub portion toward the forward end of the needle, the limiter portion having a skin engaging surface that is adapted to be received against skin of an animal to receive an intradermal injection, the needle forward end extending beyond the skin engaging surface a selected distance such that the limiter portion limits an amount that the needle is able to penetrate through the skin of an animal.

2. (previously presented) The assembly of claim 1, wherein the hub portion and the limiter portion are integrally formed as a single piece made from a plastic material.

3. (previously presented) The assembly of claim 1, wherein the hub portion and the limiter portion are formed as separate pieces.

4. (previously presented) The assembly of claim 3, wherein the limiter portion includes an inner cavity that receives at least a portion of the hub portion and the inner cavity includes an abutment surface that engages corresponding structure on the hub portion to thereby limit the amount that the needle forward end extends beyond the skin engaging surface.

5. (previously presented) The assembly of claim 3, wherein the limiter portion is integrally formed as part of the syringe and the hub portion is received within the limiter portion.

6. (previously presented) The assembly of claim 5, wherein the skin engaging surface surrounds the needle, and has a thickness defined between an inner diameter and an outer diameter and wherein the inner diameter is at least five times greater than an outside diameter of the needle.

7. (previously presented) The assembly of claim 6, wherein the skin engaging surface is generally circular.

8. (previously presented) The assembly of claim 1, wherein the skin engaging surface includes a central opening that is slightly larger than an outside dimension of the needle and the skin engaging surface is continuous.

9. (previously presented) The assembly of claim 1, wherein the skin engaging surface is generally flat and extends through a plane that is generally perpendicular to an axis of the needle.

10. (previously presented) The needle assembly of claim 1, wherein the selected distance that the forward end of the needle extends beyond the skin engaging surface is fixed.

11. (previously presented) The assembly of claim 1, wherein the selected distance is in the range from approximately .5 mm to approximately 3 mm.

12. (previously presented) The assembly of claim 1, wherein the skin engaging surface includes a contact surface area that is large enough to stabilize the assembly in a desired orientation relative to the skin.

13. (previously presented) The assembly of claim 12, wherein the desired orientation is generally perpendicular to the skin.

14. (previously presented) The assembly of claim 1, wherein the drug container is a syringe and the animal is human.

15. (previously presented) An intradermal delivery device for use in making intradermal injections, comprising:

a drug container having a reservoir adapted to contain a selected substance and an outlet port that allows the substance to exit the reservoir during an injection;

a needle in fluid communication with the outlet port, the needle having a forward end that is adapted to penetrate an the skin of an animal; and

a limiter that surrounds the needle and has a skin engaging surface that is adapted to be placed against the skin of the animal to receive an intradermal injection, the needle forward end extending away from the skin engaging surface a selected distance such that the limiter limits an amount that the needle forward end penetrates the skin.

16. (previously presented) The device of claim 15, wherein the drug container is a syringe including a generally hollow, cylindrical body portion and a plunger that is received within the reservoir, the plunger being selectively movable within the reservoir to cause the substance to be forced out of the outlet port during an injection.

17. (previously presented) The device of claim 15, including a hub portion that supports the needle and the hub portion is selectively secured to the drug container near the outlet port.

18-24. Canceled.

25. (previously presented) The device of claim 15, wherein the needle has a length and wherein the selected distance is much less than the needle length.

26. (previously presented) The device of claim 25, wherein the selected distance is fixed and is in the range from approximately .5 mm to approximately 3 mm.

27. (previously presented) The device of claim 15, wherein the skin engaging surface is generally flat and extends through a plane that is generally perpendicular to an axis of the needle.

28. (previously presented) The device of claim 15, wherein the skin engaging surface includes a central opening that is slightly larger than an outside dimension of the needle and the skin engaging surface is continuous.

29. (previously presented) The device of claim 15, wherein the skin engaging surface includes a contact surface area that is large enough to stabilize the assembly in a desired orientation relative to the skin.

30. (previously presented) The device of claim 15, wherein the desired orientation is generally perpendicular to the skin.

31. (previously presented) The device of claim 15, wherein the drug container is prefilled with a substance.

32. (previously presented) A method of intradermally injecting at least one substance such as a drug, vaccine or the like into the skin, comprising the steps of:

pressing a needle perpendicularly to the skin of the animal to receive an injection, said needle in fluid communication with an outlet port of a drug container having a reservoir adapted to contain a selected substance and the outlet port allows the substance to exit the reservoir during an intradermal injection;

injecting the substance into the skin of the animal with the depth of penetration of the needle being limited to the intradermal space by a limiter that surrounds the needle and has a skin engaging surface that is adapted to be placed against the skin of the animal and a forward end of the needle extending away from the skin engaging surface a selected distance such that the limiter limits an amount that the needle forward end penetrates the skin of the animal.

33. (previously presented) The method of claim 32, wherein the step of pressing the needle perpendicularly to the skin of the animal includes orienting the needle perpendicularly to the skin.

34. (previously presented) The method of claim 32, wherein the step of injecting the substance includes moving a plunger that is received within the reservoir, with the plunger being selectively movable within the reservoir to cause the substance to be forced out of the outlet port during the injection.

35. Canceled.

36. (previously presented) The method of claim 32, further comprising the step of filling the drug container with the substance to be intradermally injected.

37. (previously presented) The method of claim 32, wherein said drug container is a syringe and said animal is human.